



TECHNICAL CIRCULAR No. 601 of 05th January 2020

To	All Surveyors/Auditors
Applicable to flag	All Flags
Title	Guidelines for Exhaust Gas Cleaning Systems
Reference	IMO MEPC EGCS

IMO MEPC Guidelines for Exhaust Gas Cleaning Systems

The IMO guidelines incorporate two basic concepts for approval, Scheme A, parameter check, and Scheme B, continuous monitoring. The Scheme A parameter check route enables demonstration of compliance in service by verification of certain components and settings, such as washwater flowrate, without the need to undertake continuous gaseous exhaust emissions measurements. This concept is enabled by the SO_x EGCS being certified at testbed (or onboard) for air emissions compliance, as demonstrated by confirmation of meeting the SO₂/CO₂ ratios, and issuance of the unit specific SO_x Emission Compliance Certificate (SECC). The emissions testing requirements of Scheme A are similar to those required for certification of diesel engine Parent Engines to the NO_x Technical Code. The IMO MEPC guidelines also include the requirement for continual monitoring of washwater discharges at all times the SO_x EGCS is in operation and therefore Scheme A is actually parameter check and continual monitoring. Scheme A also includes the 'Type Approval' aspects for serially produced units, however we understand that virtually all SO_x EGCS approvals so far have not been undertaken to Scheme A but to Scheme B.

The Scheme B approach demonstrates compliance with the sulphur regulations by continual monitoring of the air emissions SO₂/CO₂ ratio by an approved exhaust emissions monitoring system. This treats the SO_x EGCS as a 'black box' and requires no pre-approval of the actual SO_x EGCS. This means that only the documentation associated with the SO_x EGCS is approved by the Technical Office and the installation and operation is verified at installation and Initial Survey by the Surveyor for full compliance with the requirements of the guidelines. Scheme B also requires parameter check (daily spot checks) of the SO_x EGCS operating parameters (temps, flowrates, etc) and continuous monitoring of washwater discharges. So Scheme B is actually continuous monitoring and parameter check.

Further explanatory text for Survey purposes is given in the Survey Tracking Forms for Schemes A and B to CEO-PRI-00349 (Legacy: EWZ -001-02-P06-W023). Both Scheme A and Scheme B require approval of the associated SO_x EGCS documentation including the EGC Technical Manual

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(ETM-A or ETM-B), the Onboard Monitoring Manual (OMM) and EGC Record Book. In the case of Scheme B the documentation is likely to be submitted before the SOx EGCS installation and hence Survey attendance with Tracking Form B is to verify the installation as approved. In the case of Scheme A, the documentation may be submitted after emissions testing and before installation, hence the documentation may be generic documentation, particularly if the manufacturer is trying to apply 'Type Approval'. However, both Schemes A and B also require approval of the SOx Emission Compliance Plan (SECP), which means that Scheme A includes vessel specific aspects beyond 'Type Approval' and this is also reflected in the SECC format, which is serial number based. Although equivalence with Regulation 14 of Annex VI is demonstrated by verifying the air emissions from the SOx EGCS, the predominant scrubbing technologies deployed so far are based on wet scrubbing processes using either open loop, closed loop or hybrid arrangements - see *ABS Advisory on Exhaust Gas Scrubber Systems* for more information on typical arrangements.

The control and monitoring of the SOx EGCS washwater discharge criteria to the levels required by the IMO guidelines for pH, PAH, turbidity and nitrates is perhaps the most difficult aspect of SOx EGCS installations. Although the IMO guidelines include the agreed washwater discharge limits, the acceptance of discharges within national or port waters remains a contentious issue. For example, the German administration prohibits scrubber washwater discharges in rivers and ports and the Belgium administration prohibits washwater discharges in ports and within a 3 mile zone off the Belgium coast. Also, a closed loop scrubber is also actually likely to include a small bleed off discharge which means that a holding tank may be required to completely prevent washwater discharges if a ship operator requires to operate the scrubber in these areas. The basic purpose of verifying compliance with the IMO MEPC SOx EGCS guidelines is to ensure that the air and washwater discharges meet the limits as given, that the data recording and monitoring equipment meets the prescribed requirements, that the necessary residue collection arrangements are in place and that the approved documentation meets the requirements of the guidelines and enables the operator to demonstrate compliance to interested parties such as flag and port state.

REFERENCES:

- IMO MEPC EGCS
- ATTACHMENTS: No

Kindest Regards,

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